

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in this application.

1. (Currently Amended) A method of isolating a thiol R'SH from a thiol-containing mixture, the method including the steps of

forming a mixed disulphide R'SSR of the thiol R'SH in the mixture by reacting the thiol R'SH with a second mixed disulphide R"SSR, in which R is a non-immobilised hydrophobic moiety which is not immobilised on a stationary phase, and R" is selected so that a forward reaction of the R'SH with the second mixed disulphide R"SSR to form R'SSR and R"SH is favoured over a reverse reaction of R"SH with R'SSR back to R"SSR and R'SH;

purifying the mixed disulphide R'SSR by a process selected from selective precipitation and chromatography;
reducing reacting the purified mixed disulphide R'SSR with a reducing agent to produce a the thiol-containing mixture of the thiols R'SH and RSH; and
isolating separating the mixture of thiols R'SH and RSH to isolate the thiol R'SH.

2. (Previously Presented) The method as claimed in Claim 1, wherein purifying the mixed disulphide R'SSR includes exploiting an increased hydrophobicity thereof relative to the thiol R'SH.

3. (Cancelled)

4. (Cancelled)

5. (Currently Amended) The method as claimed in Claim [4] 1, wherein the mixed disulphide is purified by means of reversed phase high performance liquid chromatography (HPLC).

6. (Currently Amended) The method as claimed in Claim 1, wherein forming the mixed disulphide includes reacting the free thiol species R'SH with a the mixed disulphide compound R'R"SSR, in which R' R" is a 2-thiopyridyl group and R is a non-polar thiol group.

7. (Currently Amended) The method as claimed in Claim 1, wherein the reducing agent is selected from a group consisting of purified mixed disulphide is reduced with dithiothreitol or and β -mercaptoethanol.

8. (Currently Amended) The method as claimed in Claim 1, wherein the thiol comprising separating the mixture of thiols R'SH and RSH is isolated by high performance liquid chromatography (HPLC).

9. (Currently Amended) The method as claimed in Claim 8, wherein the high performance liquid chromatography is performed on a C18 reversed phase medium having a polar mobile phase.

10. (Cancelled)

11. (Currently Amended) The method as claimed in Claim 61, wherein the group hydrophobic moiety R is a substituted or unsubstituted polynuclear aromatic group.

12. (Currently Amended) The method as claimed in Claim 11, wherein the group hydrophobic moiety R is a 6-hydroxynaphthyl group.

13. (Currently Amended) The method as claimed in Claim 42 1, wherein the mixed disulphide R"SSR is 2-thiopyridyl-6-hydroxynaphthyldisulphide.

14. (Currently Amended) The method as claimed in Claim 431, wherein the thiol R'SH is 1-D-myo-inositol-2-deoxy-2-(N-acetyl-L-cysteinyl)amino- α -D-glucopyranoside, or mycothiol.

15. (Currently Amended) The method as claimed in claim 441, wherein the mixed disulphide R'SSR is 2-S-(mycothioly)-6-hydroxynaphthalenedisulphide.

16.(Currently Amended) A disulphide of the a formula R'SSR in which R'S is mycothioly and R of the substituent RS is a non-immobilised hydrophobic substituted polynuclear aromatic hydrocarbon moiety.

17.(Currently Amended) The disulphide as claimed in Claim 16, wherein the substituted polynuclear aromatic hydrocarbon moiety R is a polynuclear aromatic group substituted naphthyl group.

18.(Currently Amended) The disulphide as claimed in Claim 17, wherein the substituted naphthyl group R is a 6-hydroxynaphthyl group.